



COMPUTER APPLICATIONS

(THEORY)

(One and a half hours)

(Full Marks – 30)

(Candidates are allowed **No** additional minutes for reading this paper.)

All working, including rough work, should be done on the same sheet as the rest of the answer.

The intended marks for questions or parts of questions are given in brackets [].

Answer **any 3** questions

Question 1

- (a) Write the difference for the following:
- (i) Procedure Oriented Programming and Object Oriented Programming. [2]
 - (ii) Pre increment/decrement Operator and Post increment/decrement Operator. [2]
- (b) State the relation between:
- (i) Class and Objects [1]
 - (ii) Encapsulation Abstraction [1]
- (c) What is the range of **char** data type? [2]
- (d) What will be the output of the following program segments? [2]
- ```
int a = 0;
if(a>0 && a<20)
 a++;
else
 a- -;
System.out.println("a = "+a);
```

### Question 2

- (a) Difference between “System.out.println()” and “System.out.print()” statements. [2]
- (b) What do you mean by rvalue and lvalue? [2]
- (c) Write valid Java statements for the following: [2]
- (i) to initialize 1234 to an integer variable.
  - (ii) to assign 7654.77 to a double type variable and convert it into a constant.
- (d) What is the difference between 'D' and "D"? [2]
- (e) Write the number of bytes occupied by the following data types: [2]
- (i) int
  - (ii) float
  - (iii) char
  - (iv) double

This Paper consists of 2 printed pages.

### Question 3

- (a) What do you mean by *data type*? Name the types of *data type*. [2]  
(b) What are tokens? Name its types. [2]  
(b) Is 'String' a primitive data type? If not then what? [1]  
(d) Write the output of following statements when the main() method gets executed: [5]

```
class output
{
public void main()
 {
 int a = 12, b = 10;
 System.out.println("a++ = "+ a++);
 System.out.println("a>b = "+ a>b);
 System.out.println("++a = "+ ++a);
 System.out.println("- -a = "+ - -a);
 System.out.println("a!=(a+b) = "+ a!=(a+b));
 }
}
```

### Question 4

- (a) What are the smallest and the largest value of *short* data type? [2]  
(b) Define literals. What are different types of literals? [2]  
(c) What is the difference between  $x+1$  and  $++x$  ? [2]  
(d) Write the 'Identifier Naming Rules'. [2]  
(e) What will be the output of the following program segment?

```
int a= 5, b = 2,c;
if (a>b || a != b)
c = ++a + - -b;
System.out.print(c+ " "+a+ " "+b); [2]
```